

AMERICAN VETERINARY REVIEW,

MAY, 1888.

EDITORIAL.

AMERICAN VETERINARY REVIEW PRIZE.—Let us once again call the attention of veterinarians to it—our object—*original work* is what we want—an essay of real originality and genuine merit—not so much quantity as quality—our selected committee will look not only after the value of the papers as contributions to veterinary literature, but also after their merits as indicating original research and experiment—two papers already on hand—extension of time for entry of papers. SWINE PLAGUES.—Why not gather them under the same name as Prof. Walley did of bovine plagues—amount of writings about them—why not put them all under one head—but after all we know that they represent three affections, rouget of rothlauf, hog cholera or infectious pneumo-enteritis and diphtheria of swine, and swine plague or schweineseuche—what is wanted—a vaccine for each—one is already known for rouget—let us have another. MEDIATE CONTAGION IN PLEURO-PNEUMONIA.—Dr. Salmon's answer to Dr. Gadsden—this paper was read at the United States Veterinary Medical Association meeting in Baltimore—with the letter of Prof. Law it gives Dr. Gadsden material for reflection. VETERINARY DERMATOLOGY.—Dr. Gotthiel's translation—its value to the English readers of veterinary pathology—the subject more or less ignored and well worthy of closer study and attention, even at the hands of the faculties of veterinary colleges. DIAGNOSIS IN DOUBTFUL CASES OF GLANDERS.—One of the most difficult diseases to diagnosticate under some special conditions—means to help the veterinarian—inoculation—auto-inoculation—the donkey, the dog, guinea pig and the rabbit used for that purpose—glanders is a virulent disease—it is the function of a living being—the presence of the microbe made out by cultivation.—the *potato* as the best ground for culture—Dr. Nocard's experiments—the importance of the application to positive diagnosis. FIFTH INTERNATIONAL VETERINARY CONGRESS.—Our notice of the appeal to foreign veterinarians—let the profession of the United States heartily respond to the call.

AMERICAN VETERINARY REVIEW PRIZE.—It is quite unnecessary, as a matter of information, again to inform our readers of our annual offer of a prize to the author of the best *original* paper

upon a subject relating to veterinary science, or to repeat the remarks we have already offered upon the subject. Still we desire to bring it again into notice in order to emphasize our view of its importance, and our appreciation of the interest which we would excite in the minds of those who may think of entering the lists and competing for the premium.

Our anxious wish is that we may be instrumental, through the method we have adopted, in the production of a paper bearing its own evidence of fresh research and earnest investigation—an essay of real originality and genuine merit, which will be at once recognized and acknowledged as a contribution to American veterinary literature of permanent value and excellence: something that will not be sure to perish with the current ephemera of the press.

The pains we have taken in the selection of the Committee of Award and the success of our endeavors in this important matter, will so amply guarantee the competitors against possible injustice arising from partiality of feeling or incompetency of judgment, as to leave no room for question as to the correctness of whatever decision may be rendered; a fact than which nothing could more surely establish and enhance the value of the distinction which will inhere in the decision itself, and constitute the chief significance and worth of the prize.

Two of the competitive papers have now been received, and will be submitted to the *REVIEW*, to be followed without delay by such others as may be offered, in their due order.

We had originally fixed the limit for the presentation of the essays to the first of April, but upon a reconsideration of the point, we have decided to extend the date to the fifteenth of June, at which time we shall conclude that all who contemplate a participation in the contention will have perfected their intention and forwarded their essays. Should any of the papers fail to reach our hands at the time appointed they will be reserved for the next year's contest, unless they are withdrawn or otherwise disposed of by their authors. Our desire to improve the occasion of some authentic meeting of veterinarians, for the announcement of the name of the successful competitor, is our principal reason for the

change of date thus designated. A shorter time would be insufficient for the publication of the papers in due season.

And now the arena is cleared and awaits the entry of the contestants for the meed of honorable praise and commendable ambition.

SWINE PLAGUES.—Since our esteemed colleague, Professor Walley, has given his attention to the subject of the several contagious diseases of ruminants, which work such havoc among the victims of their attack, and has included them all in a single group under the term of "bovine plagues," why would it not be a good work for some of our friends to perform the same office for the three affections of the swine family which have proved so refractory, both to sanitary and medical treatment, and so baffling to pathological research, and which prove so destructive, and entail such loss to the owners of this species of property throughout the world, by bringing them under the common designation placed at the head of these remarks, and so descriptive of their character, as "swine plagues?"

It would be no easy task to measure the amount of literature which has been devoted to these diseases, or the countless pages of discussion they have elicited, more, probably, in our own country than among European writers. Indeed, so much has been said and so much published upon this theme that it was becoming difficult to determine whether any real progress had been accomplished by the researches which had been prosecuted, or whether it might not be reasonably feared that the darkness which enveloped the disputed issues was not rather becoming more and more dense, and the confusion worse confounded, by a very excess of discussion.

But if pathologists and veterinarians have patiently, if dubiously as well, waited and watched while observation and discovery have been in progress, they must at last feel fully satisfied with the results which have been secured, and especially by what has been accomplished on our own continent.*

From the aggregate of the opinions which have been expressed and from all that can be gathered from the collective views of

* See REVIEW for April.

observers throughout the world, the existence of three diseases, essentially different but which have been grouped under the single title of "swine plagues," is now a definitely settled fact. These diseases are :

1st. The "rouget" of the French and the "rothlauf" of the Germans, which it seems has not yet appeared on this continent ;

2d. The "hog cholera" of this country, corresponding to the "infectious pneumo-enteritis" of the English and the "diphtheria of swine" of Sweden and Denmark ; and

3d. The "swine plague" of Salmon, or the "Schweineseuche" of the Germans.

Let us now hope that the next important announcement we shall receive on the subject will be of an authenticated and successful means of treatment, of relief to breeders and owners, of safety for every one interested in swine property.

Pasteurian vaccination was long since adopted and has been for years successfully practised in many of the countries of Europe, and if any apparent failures have attended the treatment, the fact has been due to the improper employment of the virus, in inoculating for a disease other than that which it was designed to control. But its success has been assured when there has been no error in discriminating the disease, and its application has been confined to genuine cases of the rouget, from which it has been generated. That which has been found true in rouget must, and certainly will be found to be equally so in the other two forms of swine disease, and we consequently learn from our French news that Messrs. Cornill and Chantemesse have in that country succeeded in attenuating the virulence of the microbe of hog cholera, with such results as to create true viruses, which confer immunity after a mild attack of the disease.

And from Nebraska we hear of important progress achieved by Professor F. S. Billings in his investigation in the same direction, and that he has in fact succeeded in obtaining the desired virus. No time should be lost in the promulgation of our American discoveries, and in putting their authenticity and value to the test. American investigators have contributed largely to our present knowledge of swine plagues, and they cannot afford to

remain idle now, while the subject of treatment—the great practical question—both prophylactic and sanitary, still evades solution. Let us hope and predict that the credit of inaugurating a successful theory and practice of treatment will soon fall to the credit of American discovery and demonstration.

MEDIATE CONTAGION IN PLEURO-PNEUMONIA.—We greatly regret the delay which has attended the publication of this interesting and important paper, which should have been printed in our April number, and which, moreover, should have been accompanied by the report of the meeting of the United States Veterinary Medical Association, at which it was read. But if the failure to print it at that time involves no culpability on our part, neither is it due to any fault of ours that we have not yet published an authentic report of the proceedings of the meeting in question, since it has not yet reached our hands from the Secretary's office. No one regrets this omission more than ourselves. Many of our readers are members of the Association, and it was amidst fostering influences found in that body that the *REVIEW* found its inception and began its existence. It is difficult, therefore, to realize the fact or comprehend the reason, if any there be, for the total ignoring, on the part of the Secretary of that body, of our perfect readiness to give the ordinary publicity to the transactions of the Association. We have endeavored to repair this omission, and we feel assured that our readers will read Dr. Salmon's paper with the interest it deserves.

In this paper and the letter by Professor Law,* Dr. Gadsden will be apt to encounter not a little material for reflection.

VETERINARY DERMATOLOGY.—In our April number we began the publication of a translation by Dr. W. Gottheil, of a paper on Diseases of the Skin of the Domesticated Animals, by Dr. G. Muller, of Berlin. We are quite sure that our readers will recognize in this treatise a work of importance and value, and appreciate the publication accordingly. The subject of dermatology is one which has been comparatively an ignored department of veterinary education. In fact, we know of no veterinary colleges which include this among their regular subjects of study. Like

* See April *REVIEW*.

medical ethics, to which reference was not long since made, dermatology is rather than otherwise adjudged to be a fit subject for instruction alone.

Aside from this it may be asked what of its literature; where (with the exception of what may be found in the works of French and German writers) can the English reading veterinary dermatologist find help and information? Though this is an important subject, it is in fact one concerning which the pupil will too often look in vain for information to his instructors, upon whose curriculum it has not yet been accorded a place. (We are happy to be able to say that we are not of the number who overlook its importance and ignore it in teaching.) It is high time for veterinarians to remember that in this branch of his scientific specialty there is something more to learn than the old sollenders and mallanders, and the scratches and mud fever, and that the therapeuty of the skin is not limited to the use of the blue wash, the tar and sulphur, or the lard and gunpowder applications.

If Megnin of France, and others have sought in their writings to invest the science of veterinary dermatology with somewhat of the importance and interest naturally belonging to it, this simplified translation of Director Muller will undoubtedly receive a proper welcome from our English-reading veterinary scientists, and in any case it cannot fail to supply a real want in our veterinary literature.

DIAGNOSIS IN DOUBTFUL CASES OF GLANDERS.—There are probably no contagious diseases of animals which, under certain circumstances, presents greater difficulties of diagnosis than those of a glanderous type. The signs of lesion are at times so obscure, and the positive symptoms of so doubtful a character (without referring to the cases in which, though present, it is under a latent form, and baffles the closest observation), that very often the practitioner is disposed to despair of reaching a satisfactory conclusion, until he has placed his patient in a condition of isolation, and subjected him to a long course of observation and experiment. This of course subjects the owners of suspected animals to serious loss and inconvenience, with the superadded pos-

sible danger of contagion still existing, and without the advantage which might accrue from the chances of failure of a glanderous development.

The inoculation of other animals and the auto-inoculation of those which are under suspicion have often largely aided in the discovery of the true nature of the discharge which has been found to issue from a diseased gland, when in the absence or oversight of these artificial tests, a total failure might have attended the search for the truth of the case. These favorable results have also been obtained in a variety of cases when other than equine patients have been the subjects. The donkey, the dog, the guinea pig and the rabbit have all furnished their contingents, though the success with the different animals has sometimes varied in its degree.

But aside from this mode of reaching the truth, there is another simple method of obtaining evidence, which is available toward the formation of a positive diagnosis. This consists in noting the results obtained by the culture of the microbe of the real glanderous affection. Glanders being a virulent disease, it is therefore the "function of a living being," as has already been made known by the interesting researches of Bouchard, Löffler and Schütz. Several varieties of cultures of this microbe are already known, but of all these, that which has proved more rapid, simple and powerful than the rest in the hands of Director Nocard is that made with *potatoes*. In a recent communication made by him before the Central Society of Veterinary Medicine, Dr. Nocard declared, "That of all the media used for the culture of the bacillus of glanders, the potato is, beyond doubt, the most precious." And proceeding, he gives the following as the proper method of manipulation: "The potato is first well washed and cleansed without removing the skin, and then placed into a solution of corrosive sublimate, one part to the thousand, where it is kept for one or two hours, in order to destroy all germs on its surface. It is then cut in two and placed in a culture jar and well covered. Steaming these in the boiling water bath for one or two hours, they are thus well cooked and all the germs which may soil them are thus destroyed. Then carefully removing the

cover of the culture jar, in order to prevent the introduction of surrounding atmospheric germs, the glanderous (?) products well diluted with distilled or sterilized water, are spread over the potatoes, and the jar carefully closed up. After several days, a great number of colonies of new growth can be observed and recognized by the peculiar brown-yellowish color which they assume, which are characteristic of the glanderous bacilli."

This method of detecting the true nature of the suspected disease, though seeming to be so simple a process, is by no means free from its difficulties, and requires for its successful accomplishment a thorough knowledge and careful manipulation, such as can only be acquired by experience in obtaining cultures of microbes. But it ought, even in the hands of amateur investigators, and certainly in those of observing practitioners, to become a ready means of correct diagnosis, and greatly tend to prevent the ignorant and uncertain attempts of almost daily occurrence in practicing; and would certainly supersede the possibility of the errors so often illustrated in the cases of such "experts" as we occasionally encounter in practice. It was by resorting to this method that Director Nocard on one occasion established the integrity of a diagnosis in a case of suspected human farcy, in which, though the case had been *clinically* demonstrated, it was not certainly established until the culture test was brought into successful requisition.

FIFTH INTERNATIONAL VETERINARY CONGRESS.—We made mention of this contemplated event in our last number, but feel that the importance of the occasion amply justifies a further reference to the subject. Too much cannot be said in urging it upon the attention of our readers, nor can they be too often reminded of the interest and magnitude of the expected assemblage. It is with these views, and a desire to furnish our colleagues with all necessary information in the premises that we print on another page a translation of the appeal of the Committee on Organization to the veterinarians of other countries, which has been forwarded to us by that committee, and which, we trust, will meet with a general and hearty response from the profession in the United States.

PAPERS COMPETING FOR THE REVIEW PRIZE.

THE INTIMATE PATHOLOGICAL NATURE OF PARTURIENT
APOPLEXY.

EX FACTO JUS ORITUR.

No subject within the province of bovine pathology has elicited so much discussion, or called forth such a diversity of opinion as the essential nature of parturient apoplexy. It does not materially matter what name is applied to a disease, provided such designation clearly expresses some requisite feature or pathological ingredient of the malady. It is an obvious error—and one that might be fraught with dire results—to apply to diseases names which may lead to mistaken conceptions of the morbid process which constitutes the physical basis of the disorder. Practitioners generally accept with too great willingness the nomenclature of disease, and thus names often become substitutes for actual knowledge, and morbid entities escape the grasp of clear conception. This fact suggests the great importance of correctly naming specific morbid states. The highest end of veterinary medicine is rational and scientific therapeutics. Every consideration is subordinate to the consideration of success in treatment, and every piece of exact knowledge regarding the *modus operandi* of disease increases the veterinarian's power of influencing morbid action.

Undoubtedly, the conception which we form to-day of the pathogenic basis of parturient apoplexy more nearly approximates the truth than did the earlier and cruder conceptions which found expression in the essentially vague phraseology of *parturient apoplexy*. Both physiological and pathological research have contributed much to the elucidation of this otherwise obscure subject. And every additional ray of light has only served to bring into greater prominence the errors which encumbered original hypotheses. What, then, is parturient apoplexy? Formerly, apoplexy was always used to signify the train of phenomena

which attend upon sanguineous discharge into the cerebral substance, and parturient apoplexy meant such discharge during the parturient state. There never would, indeed, never could have been any controversy touching the essential nature of this disease had not the march of pathological science brought to light facts which were at variance with received opinions.

The scalpel disclosed this pregnant truth—namely, that the phenomena of the so-called apoplectic condition in the parturient state were not due to what was then understood by apoplexy, viz: a sanguineous discharge into the cerebral substance. With this vital fact clearly demonstrated, it became obvious that even though hemorrhagic extravasation may be present in a case of parturient apoplexy, it by no means furnishes proof that the essential condition upon which the phenomena of the disorder depends is cerebral congestion. It is a mooted question even now with neurologists and pathologists whether actual hemorrhage into the cerebrum can take place without antecedent and concomitant disease in the blood-vessels themselves. MM. Charcot and Bouehard have declared that cerebral hemorrhage almost invariably followed arteritis, and Hammond accepts the same opinion. The liability to cerebral hemorrhage is not diminished by pregnancy, and its occurrence during that, or the parturient state, attended with the phenomena of parturient apoplexy, by no means affords evidence of its connection in a sequential relation with either of the above-named conditions. Some authorities record examples of parturient apoplexy where death ensued, and where post-mortem examination disclosed blood-clots in the brain. Now these cases can have no great importance in their bearing upon the subject, as it is not shown that they were not ordinary cases of cerebral hemorrhage occurring during the parturient period. In the several autopsies we have made in cases where death resulted from well-defined parturient apoplexy, every evidence of congestion was wanting. We may quote here the language of Fleming: "The examination of the brain has not yielded very satisfactory or constant results." Regarding the morbid anatomy of cerebral congestion, Hammond says: "There are certain appearances seen in the brains of those who have died

of cerebral congestion which are characteristic." The absence of these is presumptive evidence, at least, of some other morbid condition.

Following close upon the discovery that hemorrhagic extravasation was not always present at post-mortem came a revolution in opinion concerning the intimate nature of parturient apoplexy. Factors not yet recognized were potential in the evolution of the disorder, and the time was now opportune for the growth of hypotheses. These succeeded each other in rapid succession. From the doctrine of congestion, through every shade of changing opinion, passed the professional mind, and even yet there is no definiteness to professional opinion. Franck and Fleming, perhaps, more than any other investigators, have sought to irradiate this special field of bovine pathology. The hypothesis first enunciated by Traube and Rosenberg has been carefully investigated by these distinguished writers on veterinary medicine, and they declare (Fleming's Veterinary Obstetrics, page 668) that "if we consider the conditions which are present at parturition, as well as the symptoms of the disease, we are led to attribute the origin of the latter to an acute anæmia, and consequent sudden loss of brain power." It is true that the anæmia, which is here regarded as the efficient cause of the phenomena, is itself a sequential condition—the antecedent state being one of hyperæmia. The experimental researches of Kussmane and Tenner have shown that cerebral anæmia will induce the phenomena of parturient apoplexy in every grade and degree in which they occur, from simple motor and sense disturbance to the profoundest convulsion. Now here are the phenomena of a disease which arises only during the parturient state in the cow. Rarely is the same group of symptoms seen apart from this condition. Naturally the inquiry arises, What is there in the parturient state of the cow that predisposes her to this disease? The quality of the blood is changed. It is hydræmic. As pregnancy advances the disproportion between the corpuscular elements and the liquor sanguineous increases. The oxidizing properties of the blood are diminished. The physiological law of healthy functioning requires the uniform supply of normal blood. The culmination

of the evil tendencies of hydræmia is reached in a well-defined case of parturient apoplexy. But it is not necessary that the entire encephalon shall be involved in the anæmic process for the evolution of a case of parturient apoplexy. Corresponding to the extent and variety of symptomatic expression may be pathological involvement of a part only, or the whole of the cerebral organ. Associated with the general hydræmia may be ischæmia of the brain, and this may involve the sensory tract or the motor tract, or both. But aside from the impoverishment of the blood as a predisposing factor in the disease it must be remembered that the nervous system is greatly exalted in sensibility, and the liability to every form of nervous perturbation correspondingly increased.

MacDonald, in 1878, published the results of some very carefully conducted experimental examinations, and expressed the belief that eclampsia in women was due to irritation of the vaso-motor centre in consequence of an anæmic condition of the blood. We will revert to this subject farther on. The form of anæmia which obtains in pregnancy and parturition may be serous or polyæmic, albuminous or hydræmic. Taking, then, the conditions of blood impoverishment and nerve exaltation, in conjunction with increased arterial pressure, we are no longer at a loss for a physiological and scientific explanation of the phenomena of the disease. A greater liability to this disease exists in those cows whose condition is one of arterial fullness, as the pressure of hydræmic blood renders the animal very obnoxious to the disease.

Bidder and Murek have shown experimentally that pressure alone would not induce eclampsia, and that the induction of this condition required blood-impoverishment. It is admitted by all writers that the predisposing elements enumerated in this paper always attend the parturient state. It is only necessary that the exciting factors shall be engrafted upon these to provoke a case of parturient apoplexy. It needs only the torch of irritation to fire into activity the latent embers. This is furnished in the process of active parturition. All physiologists agree that visceral irritations may be potent causes of motor and sensory disturbances in every shade of intensity. Let, for example, the great

splanchnic centre receive violent impact and instantly, almost, the transmitted impulse excites the contractile fibres in the brain, and the patient sinks away from sheer cerebral bloodlessness. Let the point of irritation be somewhere in the course of the enteric tract, and similar results will follow. Other things being equal, the degree of irritation determines the extent of morbid manifestation. In chronic diseases affecting any organ remote from the encephalon, the irritation is slowly carried along the afferent nerves until the great centres are reached, and then the work of general retrogression goes rapidly forward. Now parturition is not a chronic process, but it makes up in intensity of action for length of time. It may be likened to violence, and the whole nervous system feels the force of the energetic action.

As pointed out by MacDonald, it is not until the deep-seated nerve centres are implicated in the irritation that that profound degree of anæmia takes place, which leads to unmistakable symptomatic pictures. We are aware that this anæmic view of the pathology of parturient apoplexy is not generally received. Indeed, it has never challenged the consideration its importance demands. In human medicine it has revolutionized opinion and practice, and the veterinary profession should not be many steps behind their fellows in the higher science and art.

It is impossible at the present time to set a limit to the influence of peripheral irritation in inducing morbid states, by reflex action, in remote parts of the animal organism. In support of the view here maintained, we may quote a brief passage in illustration of the influence of irritation in exciting morbid conditions. He says (*Diseases of the Nervous System*, page 880): "a painful sensation starting from the testicle leads, at first, to a contraction of the muscular tissue of the scrotum, with retraction of the testicles. When this pain reaches a sufficient degree of intensity, the walls of the abdomen and of the several hollow viscera contained in the abdominal cavity, enter also into contraction. There may even be developed general convulsions, the result, doubtless, of the reflex contraction of the vessels of the nervous centres, and of the oligemia resulting therefrom."

The experiments of Gœtz demonstrated that violent impact against the belly of a frog produced sudden anæmia of the brain, and determination of the volume of blood to the abdominal cavity. The same observation can be made by any veterinarian. The influence of irritation in exciting spasm of small vessels by excitation of the vaso-motor centres which enervate their walls, finds a happy illustration in the symmetrical gangrene of M. Maurice Reynaud. The initial irritation may be anywhere remote from the affected parts, but the excitation will be transmitted to the bulb, and thence reflected to the extremities.

To-day the question of anæmia as the basic element in parturient apoplexy is only beginning to attract the attention of veterinarians. The more rigidly the matter is looked into, the stronger will grow the conviction that the old theories regarding cerebral congestion are not adequate to a rational exposition of the disorder under consideration. A glance at the mortality rate of parturient apoplexy is sufficient to convince even a novice that our means of controlling the disease either are impotent or that we are in ignorance regarding the pathological condition that we wish to combat.

According to Franck, Saint Cyr and Stockfleth, the mortality rate ranges from forty per cent. to fifty per cent. Such a death rate is proof that we have not learned yet how to treat the disease successfully. But it will be found that where plans of treatment are instituted upon the theory of a brain anæmia as the underlying causal factor, this rate is materially lessened. The indications for treatment are two-fold. The great central nerve organ—the brain—must be furnished with a sufficiency of blood by proper treatment, and the local irritation in and about the generative organs must be allayed. For the purposes of successful management, this latter indication possesses equal importance with the first. The therapeutics of this disease, as outlined in text-books, is mainly a marshalling of therapeutic illusions, and the practitioner who "treats by the book" will reap bitter fruit for his labor.

ORIGINAL ARTICLES.

MEDIATE CONTAGION IN PLEURO-PNEUMONIA.

By D. E. SALMON, D.V.M., Chief of the Bureau of Animal Industry.

(Read at the Meeting of the U. S. V. M. Association.)

In the fall of 1886 Dr. Gadsden was in Illinois and preached the gospel of mediate contagion with such enthusiasm that he converted the State Live Stock Commission, and persuaded them to force the issue with the Bureau of Animal Industry, as to whether the disinfection of premises where diseased cattle had been was a necessary precaution against this contagion. A controversy was started in this way which is not yet finished. The doctor and his disciples have carried their case into the daily and weekly newspapers, and seem to consider it a most remarkable feat when they have succeeded in convincing people who under no circumstances have an opportunity of hearing the other side of the case, and who from total lack of scientific training would be incapable of reaching a logical conclusion if they had all the facts before them. The propagation of these erratic views, which under no circumstances can make the measures adopted against pleuro-pneumonia more thorough or hasten the time when the disease will be eradicated, have done much to cause distrust of veterinary counsel and to impede the progress of the work.

Some of you will doubtless remember that at the meeting of this Association at Philadelphia about a year ago, I asked for an expression of opinion on the theory of mediate contagion and on the necessity for disinfection. If I remember correctly, there was no voice raised at that time in support of the theory that pleuro-pneumonia can only be propagated by contact with the living diseased animal, and there was a unanimity of opinion in favor of disinfection.

Dr. Gadsden was not willing to leave the decision of this question to veterinarians, but prepared a case, like a lawyer would prepare a brief, giving those observations which apparently upheld his theory and suppressing those which demonstrated that the contrary was true. He even wrote to such men as Williams, McCall and Stevenson, who have long been known as supporters of this strange proposition, for their views, and in that way was able to show that nearly all the professional men whom he had heard from were believers in the necessity of contact with the living diseased animal.

With this one-sided paper, the doctor went to the Kansas City convention of stock-growers to elucidate, for the benefit of these non-professional men, one of the most important questions to be considered in adopting measures for the eradication of the most insidious of all animal plagues. His object was not to show that the work now done was not sufficiently thorough and to gain support for more stringent measures, but on the contrary he desired to prove that it was too thorough and that a part of it should be left undone. It is seldom that one finds a professional man occupying such a position, for usually they prefer to err on the safe side and carry out the most stringent measures that are possible.

As it happened, however, the programme of this convention had been prepared some weeks in advance of the meeting, the parties who were to read papers were invited to prepare them on particular subjects, and no other papers whatever were accepted. Dr. Gadsden's paper was ruled out on this account, and he was advised to read it at the meeting of veterinarians and State Live Stock Sanitary Boards, then in progress, where it could be intelligently discussed.

Apparently not pleased by this decision, the doctor sent his paper to various newspapers with a letter, to some parts of which I must take exceptions. "I was very much surprised," he says, "to find the convention run by a certain clique in the interests of the Bureau of Animal Industry." I would like to ask if that is not a remarkable statement in view of the fact that the most important resolution passed by that convention favored legislation

to take the entire pleuro-pneumonia work away from the Bureau and place it with an independent commission? "And its business controlled by a committee, one of whom was Dr. Salmon, the head of that Bureau." Yes, I was a member of a committee of five on order of business, but I do not see any particular reason for surprise in that fact, as I was a regularly appointed delegate.

"Unfortunately," he goes on, "the *facts* that I had gathered did not agree with the theories of Dr. Salmon, and my paper and the accompanying correspondence met an ignominious fate in this committee of censors, there suffering strangulation." The doctor is not correct in this statement; his paper was simply declined as were all others that were not prepared by invitation of the executive committee. The convention had certain work to do and it had no time to go out of its way to discuss a question of detail in the scientific work for the eradication of disease. So much by way of introduction.

I desire to show now that I am not afraid to meet the doctor's facts in a fair discussion before a professional audience.

He begins as follows: "It seems hardly necessary to say that pleuro-pneumonia or lung-plague in cattle is incurable and highly contagious; but the result of careful research and the experience of years shows that the contagion can only be communicated by contact with the living diseased animal. The disease is so insidious that it has only been after the most careful and thorough tests that this decision could be arrived at."

Is this one of the facts which the doctor referred to in his letter? If so, I must respectfully but firmly object to it. The experience of years has shown nothing of the kind but, on the contrary, cases are recorded from the beginning of intelligent observation of lung-plague to the present time, which show conclusively that contact with the living diseased animal is not necessary for the contraction of the disease. So with experiments—some have given negative results and some positive results, the same as do all experiments in every department of science. In chemistry every experiment does not succeed even when we think it ought. But you cannot build up a science upon the negative results of experiments; it is the positive results which are

accepted, and with reason. A negative result is nothing, it is a zero, a cypher, and you may add together a hundred or a thousand cyphers and you get what? Nothing. But when you get positive results you have something tangible, and if you can repeat them a reasonable number of times it is a demonstration. With this question, however, a few gentlemen have built up a theory on negatives, they have scrupulously discarded all positive results and have apparently convinced themselves at last that they have in this peculiar way demonstrated their hypothesis and that it is no longer a theory but a fact. If they are reposing with dreams that the world at large has accepted their conclusion, they are destined to a rude awakening, for they stand to the other members of the profession in some such proportion as the three tailors of Tooley street to the people of England.

Dr. Gadsden continues: "In Pennsylvania, the State that I have the honor to represent, Dr. Francis Bridge has possibly had as large an experience in this disease as any person in the United States. In frequent conversations and in letters hereto appended, he states most unqualifiedly that the disease can only be communicated by contact with the living diseased animal." Very well, Dr. Bridge also believes that it is impossible for an animal affected with chronic pleuro-pneumonia to disseminate the disease. Dr. Gadsden, on the other hand, believes such animals to be very frequent sources of the plague. Dr. Bridge's observations with chronic cases have been equally extensive with his observations on the subject of mediate contagion. Why not accept his views on the one as well as the other? What a relief it would be in the work of stamping out this treacherous malady to be able to overlook chronic cases and infected premises with impunity!

The doctor's case is rested principally, however, upon the so-called experiment with the Shufeldt distillery stables in Chicago. He says: "But perhaps the most conclusive test, and the one on the largest scale, was made in the city of Chicago, at the sheds of the Shufeldt distillery. These sheds had been occupied with cattle affected with pleuro-pneumonia, 455 out of 497 being found diseased; and the last ones were slaughtered on December 10,

1886. Messrs. Shufeldt & Co. were anxious to refill their sheds and made application to the State Live Stock Commissioners for permission to do so. Having been called upon, I gave my opinion that this would be entirely safe, providing the animals brought in were perfectly healthy."

Dr. Gadsden appears in this paper to have overlooked another condition which he made at the time, viz., that the stables should be thoroughly disinfected. It is a very serious omission, and one which must have great influence on our opinion as to the value of the test.

"Upon Mr. Shufeldt's guaranteeing this (the healthfulness of the animals), the Commissioners gave the necessary permit and on December 18, 1886, 894 fresh healthy cattle were brought in and kept under strict quarantine until the time of slaughter, which was during June and July, 1887. Each animal was carefully inspected and a post-mortem examination made by Dr. Casewell State Veterinarian, a man thoroughly familiar with the disease, its symptoms and characteristics. He reported that these animals were all found free of any taint of pleuro-pneumonia.

"Although these sheds stood empty for a time and were partially disinfected, the flooring was not removed and the mangers and fixtures remained, the only essential precaution insisted upon being that none but absolutely healthy cattle should be introduced.

"The experience in this case was not a singular one, and though I was looked upon as bordering upon rashness in giving this opinion, yet from my own experience of many years and the testimony of those in whom I have unbounded confidence, I felt assured that I was right and the result has proved the correctness of the opinion."

That is Dr. Gadsden's case as made out in favor of immediate contagion alone in pleuro-pneumonia. This so-called test at the Shufeldt distillery stables has been widely heralded as conclusive on the subject and is therefore worthy of closer investigation. As a test of mediate contagion its value must depend entirely upon the character of the disinfection. If this was thorough the virus must have been destroyed and there could have been no opportunity to test its preservation and ability to produce disease.

This important factor is almost entirely lost sight of in the paper in question. In all of the work of the Bureau of Animal Industry we rely upon disinfection to destroy the contagion in stables and, consequently, as soon as a disinfectant has been scattered about a stable, the conditions for a reliable experiment on mediate contagion are destroyed. The disinfection might not have been thorough, but there is no way to tell just the degree of its action, and, consequently, if no disease follows under such circumstances you do not know whether to attribute this to the disinfection or to some other cause. Hence the problem is complicated, and the results are unreliable as tests of this question.

The thoroughness of the disinfection in the Shufeldt stables is a much debated question and one that probably will never be settled. The owners claimed that the stable was frequently flooded with water and then well washed with carbolic acid and lime water.

Prof. Law, who looked into this case quite thoroughly, said: "The disinfection of the Shufeldt stables was not exactly a model for other disinfectors, but it proved nevertheless to be thorough. A small portion of the stables was not even washed with the chloride of lime solution. But the great extent of adjacent low-roofed sheds well saturated with the chloride kept the whole air, even in the unwashed portion, charged with chlorine and chlorine compounds, which not only penetrated into the interior of every porous substance, but was inhaled day and night by the cattle afterward placed in the sheds."

My own opinion is that the extremely cold weather had something to do with freeing these stables from the contagion. There are some kinds of contagion which do not resist freezing, but no experiments, so far as I know, have been made with pleuro-pneumonia virus to settle this question. But I cannot go into the matter more in detail—the question is, can we accept as a test of this question the negative results which follow from putting cattle into a shed which has been vacated in the dead of a Chicago winter and in which disinfectants have been used? I certainly should reject such an experiment as absolutely worthless.

Turning now to the other aspect of the question, let us see

what there is to show the spread of this plague by mediate contagion. Dr. F. M. Röhl says in his *Thierseuchen*:

"The contagion can be spread by different and especially by porous objects, as by clothing worn by persons attending to diseased animals, by blankets used about such animals, by stable utensils of different kinds, by animals that have been sheltered in infected stables, by straw, hay, etc., which has been stored in such stables. The tenacity of the plague is very great and it can be preserved even for months under favorable circumstances, as experiments have shown. Lydtin (*thierarz mitth*, xi) cites a case of the introduction of infection by the cooled meat and lung parts of a diseased cow, which had been killed three or four days before. Twenty-five days after taking these parts into the stable a cow became sick, and at the autopsy it was demonstrated to be lung plague. A few days later a second cow, and shortly after a third one became affected with the disease."

Becker remarks that the emanation from a burial pit in which the carcasses of some pleuro-pneumonia heifers were buried three months before, had caused the development of the disease in other cattle.

It has been repeatedly proved that cattle which were kept in stables in which some months before animals had died of pleuro-pneumonia and which stables had not been disinfected, have contracted the disease. Cases are frequently reported in which the disease has been awakened after months by hay, straw and manure, which were contaminated by the secretions of affected cattle.

Dictionnaire de Médecine de Chir. et d'Hygiène Vétérinaires, par Hurtrel D'Arboval—rewritten by A. Zundel. Vol. III, p. 93:

"This volatile virus is found above all in the breath of the animals, and this is why the disease is easily carried by people who have been in contact with sick beasts and whose clothes are impregnated with the emanations of the animals, by cow dealers, butchers and quacks. It has been carried by healthy animals which had cohabited with the sick ones and which appeared themselves refractory to the disease; it has been observed to be

carried in this way by horses. It has been communicated by hay, straw, manure, impregnated with the products of the exhalations. The cases where these matters have preserved the virus during three or four months are not rare, and Furstenberg cites unequivocal cases where hay, obtained from a stable where there had been pleuro-pneumonia and given to fresh animals, has still communicated the disease after nine months. A stable which has been inhabited by one or several pleuro-pneumonia animals, a railroad car which has served to transport sick ones, preserves the virus for a very long time, and the cases are not rare where cattle put into a stable where there had been pleuro-pneumonia, have contracted the disease three or four months afterwards, if care had not been taken to thoroughly disinfect it."

Galtier in his *Traité des Maladies Contagieuses et de la Police Sanitaire des Animaux Domestiques*, makes statements of the same kind.

Dr. Mehenkel, in his report on the *Etat Sanitaire des Animaux Domestiques* for Belgium, for the year 1881, says, p. 43:

"A statement which seems to us equally worthy of being mentioned in the present resume is found in one of the reports of V. Laridon, of Thonront. This estimable practitioner saw the disease appear among the animals of an isolated farm; nothing could have brought here the germ of the disease. Laridon thinks that this outbreak of pleuro-pneumonia must be attributed to opening a pit where three years before cattle affected with pleuro-pneumonia had been buried."

I have had cases reported to me in Brooklyn where the disease was started up afresh after the herd had been free from it for three or four years, by digging up the accumulations under the old stable floors.

Fleming and Williams both say disinfection is necessary.

Dr. Law, in his monograph on lung plague, gives a large number of instances where the disease was spread by mediate contagion. I will not take up your time with these now. Dr. Law found an unequivocal case of this kind during his work in Chicago. On May 12, 1887, a cow at the rendering platform was found on post-mortem to have died of acute lung plague. She

came from Dexter avenue, between Wood and Lincoln streets, and belonged to Patrick Kane. This cow had been kept alone in a stable, between the south branch of Chicago river and the canal. There is only a narrow strip of land at this place and but very few cows are on it. Thorough and repeated inspections of all the cows on this strip of land failed to discover any further evidences of the disease. No other affected cattle were there. A search through the books showed that a cow previously kept in that stable had died of acute lung plague on March 18, 1887, and owing to the lack of co-operation at that time, and the conversion of the State Commission to Dr. Gadsden's theory, the stable was not disinfected. A new cow was taken in from the stock-yards and it was this one which contracted pleuro-pneumonia and died.

I saw an equally satisfactory case of mediate contagion at Peoria in 1884. The plague was taken to that city by some cows purchased by Mr. Tripp at a sale at Virginia, Ill., on February 21. These cows mixed with diseased animals at Virginia, and one of them sickened about April 1. She was in a herd of thoroughbred Jerseys, and the only other herd which became affected in that locality was also a herd of Jerseys, located seven or eight miles from the first one, and belonged to Mr. Bailey. Now the animals in these two herds had certainly not been within half a mile of each other, and only one of them could have been that near. That one had been for a few weeks at the owner's stable in the city, where she had been kept to supply the family with milk. This was at the time the first cases appeared in the other herd. The nature of the plague was not recognized and the local veterinarians incautiously went from the pleuro-pneumonia cases at Tripp's stable to treat Bailey's cow for a slight attack of indigestion. A month later Bailey's cow was taken to his farm, seven miles away, but it was not until a second month had elapsed that she showed signs of lung disease. From her the disease extended, and was not eradicated until every animal in the herd was destroyed, although every effort was made to check its progress by promptly isolating the sick and by disinfection.

In the report of the Bureau of Animal Industry for 1885 (pp. 121 and 122), I have collected a number of cases where outbreaks of pleuro-pneumonia were started in uninfected herds by the practice of inoculation. These certainly are cases of mediate contagion.

But why stop to quote cases? They are innumerable. There is scarcely a man who has had a large experience with pleuro-pneumonia but that has seen equally satisfactory cases, and many others which indicated if they did not prove the dissemination of the plague by mediate contagion.

So much for the facts. Let us turn for a moment to the theory and inquire how this doctrine of contagion by contact with the living diseased animal only can be explained. How does the living diseased animal communicate the contagion? Evidently by means of the expired air. This expired air, then, must be charged with the germs of the disease, and it becomes so charged by coming in contact with the infectious matter formed in the lungs. Suppose this air is expired into a close, badly ventilated stable, the whole air in that stable becomes charged, does it not? We know from experience that in such a case the contagion may skip a dozen or twenty cows to infect the farthest one in the row. This demonstrates that the contagion is held in the air for an appreciable time and may be carried some distance in such a building and still be able to infect. How long is it held in the atmosphere? One minute, or ten minutes, or an hour? Who can answer? Will any one say it cannot be thus suspended one minute or ten minutes without losing its infective properties? And yet the advocates of this strange theory will tell you that if the sick cow is taken out of such a stable, and a susceptible healthy animal introduced only a second afterwards, the fresh cow is perfectly safe! The disease can only be contracted from contact with the living diseased animal.

They will also tell you that although the air expired by the living diseased animal contains the germs of contagion, you may take the warm and steaming lungs from a freshly killed animal and allow other cattle to breathe the exhalations, and the residual

air which they contain, with impunity, and that disease cannot be produced in that way. It does not appear to me that these statements are consistent with each other.

Dr. Gadsden quotes the letter of Prof. Axe to show that the contagion of lung plague is peculiarly unstable, and yet no one has insisted more strongly on the peculiar stability of this virus than has Dr. Gadsden himself, in his papers on the danger from chronic cases. If chronic cases are dangerous for six, twelve or eighteen months, then the virus is peculiarly stable. If in such cases it continues to exist inside of the cyst, shut off completely from the living tissues of the body, then we must admit that it would exist as well in the cyst, if this were taken out of the animal and maintained under the same conditions of warmth and moisture. And if the breaking of a cyst inside the lungs liberates the contagion and allows it to disseminate into the air with which it comes in contact, why would not the breaking of a cyst outside of the body, where it is in much freer contact with the air, produce a like result? Why would not this infectious material, if dried, pulverized, mixed with the air and inhaled, produce the disease?

The indications are that this virus is not peculiarly unstable. The practice of inoculation has demonstrated for us that the serum from the lungs retains its infecting properties for a considerable time, and if putrefaction is prevented by the addition of salt or glycerine, it produces the typical effect in inoculations after weeks or even months. If it produces the lesions of the plague in the tail after that time, why would it not do so in the lungs if by any chance it reached them?

So far as I can see the facts are all against this theory that cohabitation is necessary for the propagation of pleuro-pneumonia. But the facts are discarded and a theory has been built up on negative evidence alone. Is that science? Is it a safe foundation on which to base our measures of eradication? I believe not, and I demand better evidence before I stop disinfection and permit new herds to be placed in stables after infected ones have been removed.

DISEASES OF THE SKIN AMONG DOMESTICATED ANIMALS.

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(Continued from page 41.)

II.—PARASITIC SKIN DISEASES.

a.—*Caused by Vegetable Parasites.*

10.—ALOPECIA.

Our domestic animals not uncommonly suffer from partial or complete loss of hair, wool, or bristles where attacked by various local or general diseases. We may designate the malady alopecia symptomatica. Alopecias not thus dependent upon other maladies are, however, rare.

The condition is seen most frequently in dogs and horses, and appears as circumscribed or more extended bald spots, which gradually increase in size until they may involve the greater part of the skin. In the dog the back, tail, and thighs are most liable to be affected.

Besides the atrophy of the hairs and the hair sacs, we find pigmentary infiltration of the upper layers of the skin, especially of the cells of the rete Malpighi, of the rootsheaths and of the epithelium cells of the sebaceous glands (Siedamgrotzky, Röll.)

Opinions are yet divided concerning the *etiology*. Some consider alopecia to be caused by atrophy of the cutaneous nerves, while others seek an explanation of the disease in the presence of vegetable parasites. Nevertheless it has not yet been possible to convey the disease by inoculation.

Treatment is useless and superfluous. It is superfluous because spontaneous cure occurs sooner or later; and it is useless because all remedies thus far tried have proven valueless. Amongst those that have been tested are the fatty and etherial oils, alcohols, balsam of Peru, cantharides, sulphur ointment, chrysarobin ointment, tar preparations, sublimate solutions and tincture of iodine.

11.—FAVUS.

The *Achorion Schönleinii* causes in dogs, cats, horses (rarely), mice and chickens a skin disease which is variously known as

favus, tinea favosa, tinea vera, erbgrind and wabengrind. The fungus can be transferred from these animals to man, and the reverse. The favus of dogs, cats, horses, rabbits and mice is also transferable from one animal to another; but it has not yet been possible to inoculate other animals with the favus of chickens, or with pure cultures of the same (Gerlach, Schütz.)

Achorion Schoenleinii forms a thick network of branching hyphæ, amongst which we find round conidiæ, either scattered or en masse. The fungus can penetrate between the epidermic cells into the cuticle, the root sheaths of the hairs and even up into the hairs and feathers.

In mammals the favus eruption is especially liable to be seen on the forehead, *alæ nasi*, behind the ears, on the abdomen and the outer surface of the hind limbs. It appears as yellowish-white or sulphur colored, dry, mortar-like crusts. At first they are hardly as large as a pin's head; but they gradually increase in size until they may attain a diameter equal to that of a ten cent piece and a thickness of 2-5 mm.

They form round or elliptical, often concentrically ringed plates, the external surface of which is depressed centrally, giving it a cup shape. The dull and lusterless hairs that at first penetrate the crust soon fall out.

Under the crust we find a depression in the skin, covered with a vividly red epidermis. As a rule a little hemorrhage follows the removal of the cup.

In fowls favus appears most commonly on the comb. There appear small, dingy white cup-shaped crusts, which, growing peripherally, gradually cover the entire comb. The eruption increases slowly at first, but later spreads more rapidly; and finally it may cover the head, neck and even the entire body of the animal. The feathers become dry and brittle, and eventually fall out; the animals lose flesh and finally perish of exhaustion.

Treatment consists in the removal of the scutulæ and the application of parasiticide remedies. Of these the most efficacious are solutions of carbolic acid or creosote (1:10), red or white mercurial ointment, sublimate solutions (1:50-100), benzine ointment (1:4), tincture of iodine and pyrogallie acid ointment (1:10.)

12.—HERPES TONSURANS.

Trichophyton tonsurans grows frequently upon the skin of cattle and dogs, more rarely upon that of horses, goats and cats, and least commonly upon that of sheep and pigs. It causes a malady that is variously known as herpes tonsurans, tinea decalvans, tinea tonsurans, porrigo decalvans, ring-worm, borkenflechté, glatzflechte, teigmaul, teiggrind, etc. It is transmissible from animal to animal, and from animal to man. On rabbits it grows only after direct inoculation.

The fungus consists of filaments which branch but sparingly, and of conidiæ possessed of great powers of resistance, and usually arranged in chains. Its favorite location is between the hair and the root sheath; but it soon penetrates into the epidermic cells and inside the hair itself, so that the central canal often shows large collections of spores.

The mycelium and conidiæ may vary considerably in size; so much so that Mégnin has described two species, a *Trichophyton tonsurans* of the horse, cat and dog; and a *Trichophyton epilans* of cattle. He differentiates these not only by the different sizes of the spores, but also by the fact that *trichophyton epilans* is much more difficult to transplant to horses' skins and is much more intractable than is the other variety.

Zürn describes the appearance of herpes tonsurans as follows: "The eruption shows itself as small, round, lentil to dollar-sized, partially or completely bald, sharply limited spots, often placed side by side at regular intervals or, more rarely, confluent. Confluent spots are seen most frequently in cattle, less often in the dog and the horse. The affected spots themselves are covered by greyish-white, asbestos-like scales; older cases showing doughy, yellowish-grey or brown, or even brownish-red, leathery scales. These form thick crusts, which are often 2-8 mm. in thickness, in which the hairs, loosened from their follicles, are found entangled." When these crusts fall off, or are artificially removed, there appears a suppurating surface, which heals spontaneously. Marked itching is always present. The eruption usually appears first on the head and neck in cattle, and on the middle of the back in horses, and it spreads thence further over the body.

The *therapy* of the disease is analagous to that of favus. The scales and crusts are to be removed with the aid of *sapo viridis*, and then anti-parasitic remedies are to be applied. Especially serviceable are the tar preparations, carbolic acid, creosote (1:20), white, red and grey mercurial ointments, sublimate solution (1:50-100), photogen with oil (1:4), naphthol ointment (1:10), naphtholin ointment, thymol solution, chrysarobin ointment (1:10), and tincture of iodine.

13.—DERMATITIS CANADENSIS.

In the year 1879 Axe described a skin disease prevalent amongst horses in England, under the name of *dermatitis contagiosa canadensis pustulosa*. It was seen later in Germany, where it was also designated *impetigo contagiosa* (Schinkelda, Burke), *acne contagiosa* (Dieckerhoff, Grawitz), English or Canadian horse-pox.

The malady is certainly mycotic in its nature, for not only has it been possible to vaccinate the purulent secretion upon horses, goats and rabbits (Siedamgrotsky), but a very small bacillus has been gotten pure from the virus, and the cultures have been successfully inoculated upon horses, cattle, sheep, dogs and rabbits (Dierckerhoff and Grawitz.)

According to Schinkelda, the symptoms of *dermatitis canadensis* are as follows: After an incubation of six to fourteen days the hairs on various places, and most frequently upon the back, appears rough, and on careful observation there can be seen pea to bean-sized vesicles, unaccompanied by itching, and filled with a watery serum, which later becomes purulent. As a rule the vesicles rupture in a few days and their contents dry up into thick, honey like crusts. These fall off, together with the hairs, in six to seven days, and leave behind rounded, pigmented and bald spots, covered with normal epidermis and never desquamating.

Usually this ends the matter. But sometimes new vesicles appear in the neighborhood of the old efflorescences, and the constant and successive relapses may make the course of the disease a very tedious one.

The general health remains entirely undisturbed. There almost always occurs at some time during the disease swelling of

the larynx and the upper lymphatic glands of the neck; but it disappears in a short time.

Schinkelda believes that this dermatitis canadensis is almost the same thing as the impetigo parasitica (Kaposi) of man; but he unfortunately did not attempt to transfer the malady from the horse to the human being.

Treatment is usually needless; obstinate cases may have their course shortened by anti-zymotic remedies, sublimate solution, carbolic acid solution, sol. alum. acet. (7%), (plumbi acet. 2, alumen 2, ag. 50 Dieckerhoff), boracic acid ointment, etc.

Schinkelda tried spiritus sapon. kalin., which Kaposi had successfully employed in impetigo parasitica. But the remedy did not fulfill the expectations; it neither shortened the course of the efflorescences nor prevented relapses.

It is needless to say that spreading by contagion must be prevented.

14.—STOMATITIS PUSTULOSA CONTAGIOSA.

Eggeling and Ellenberger gave this name in 1878 to a pustular exanthem which appears in horses upon the buccal mucous membrane, and especially upon the lips, the gums and the sides and point of the tongue. It soon spreads thence to the parts around the mouth, and it may affect the nasal mucous membrane and even the conjunctiva.

It is so contagious for horses that frequently mere contact with the affected animal suffices to spread it; and it may be transmitted to cattle, sheep, pigs, fowls and human beings by inoculation of the crusts and the buccal secretion. Evidence of its communicability to human kind has recently been submitted by Holst and Gresswell. In the cases of the latter observer, the grooms that tended two horses suffering from d. pustulosa contagiosa inoculated themselves through certain small lesions upon the hands. There occurred considerable swelling of the affected members, with the formation of pustules and sores, and there was high fever, salivation and dysphagia. Recovery occurred without difficulty.

The symptoms in the horse are as follows: After a stage of incubation lasting 2-4 days, there occurs, accompanied by mod-

erate fever, an increased redness and heat of the mucous membrane of the mouth. At the places above mentioned there appear lentil to pea-sized nodules, at first singly and then in larger numbers. These soon become pustules, and when the pustules burst they leave behind roundish, shallow ulcers, with red and shiny granulating bases and yellowish-white edges.

According to Eggeling-Ellenberger, there occurs an inflammatory affection of the capillary body with swelling and small-celled infiltration. The little nodule thus formed breaks up into pus, the papillæ are destroyed, the cuticle ruptures and finally we have a sore with inflammatory and infiltrated margins. The ulcer heals by granulation of the base and new epithelium formation from the edges.

The development of the nodules and their transformation into pustules and ulcers occurs so rapidly that in most cases the mucous membrane appears sown with ulcers four days after the commencement of the disease. During the next four days the ulcers enlarge and occasionally become confluent; and they slowly heal in four to eight days thereafter.

Very frequently similar lesions occur upon the skin of the lips, cheeks, alæ nasi and, in exceptional cases, upon more distant portions of the body. Then also occur inflammatory swellings of neighboring lymphatic glands (especially the submaxillary) and usually inflammation of the nasal and conjunctival mucous membrane.

The malady is benign in its course, and needs no special treatment. Of course affected individuals must be isolated.

b.—*Caused by Animal Parasites.*

15.—SCABIES.

There are three varieties of insects which cause in our domesticated animals the affection known as the *itch*.

These are:

1. *Sarcoptes*, Grabmilben—0.2–0.5 mm. long, and 0.2–0.3 mm. broad, crab-like creatures with horseshoe-shaped heads, well developed curved jaws, whose halves interlock from above downwards, short stumpy feet, and tulip-shaped suckers. The male

has these suckers on the first, second and fourth, and the female upon the first and second pairs of feet.

The parasites burrow into the succulent layers of the stratum mucosum, and derive their nourishment from its cells. *They are communicable to man*, and may cause the itch.

Of these sarcoptous insects we have :

Sarcoptes scabiei, found in the skin of man, horses, Neapolitan sheep, and lions.

Sarcoptes squamiferous, found in the skin of dogs, pigs, sheep, goats, and probably men (Zürn.)

Sarcoptes minor, found in the skin of cats and rabbits.

A tendency has been apparent lately to unite *sarcoptes scabiei* and *sarcoptes squamiferous* in a single species under the name of *sarcoptes scabiei communis*. And, in fact, the points of difference between *S. scabiei* and *S. squamiferous* are not important, and certainly are not constant (Zürn, Johne.)

2. *Dermatocoptes*, Saugmilben, 0.5–0.8 mm. long, 0.3–0.5 mm. broad, have a body whose dorsal surface is covered with hairs and spines, a long head, long prominent jaws and tulip-shaped sucking disks upon the ends of all four pairs of feet in the male and on the first, second and fourth pairs in the female.

They live upon the cutaneous surface, especially where the hairs are thick, *without burrowing into the skin*. They obtain nutriment by sucking, by means of their mouth apparatus, fluid from the rete malphigi and the lower layers of the cuticle. *They cannot cause the itch in the human skin*.

Of *Dermatocoptes* we have :

Dermatocoptes communis, found in horses, cattle and sheep.

Dermatocoptes cuniculi, found in the external auditory passages of the rabbit.

3. *Dermatophagus*, Schuppenfressendemilben, 0.3–0.5 mm. long, 0.2–0.3 mm. broad, with bluntly-pointed head, two scissor-shaped jaws, long feet and cylindrical sucking discs, found in the male upon all four pairs, and in the female in the first, second and fourth pairs. The male also has posteriorly two other bodies, each one formed of two bristles and a sword-shaped chitinous body; and the female has two cylindrical processes and a few bristles at the same place.

They live only upon the surface of the skin, and feed upon the young epidermic cells, destroying the cuticle and the hairs.

Transferred to human skin the dermatophagus soon perishes, causing at most a slight, ephemeral eruption and never the itch.

Here belong :

Dermatophagus equi et bovis, causing a local eruption in horses and cattle (Fussräude, Steifsräude.)

Dermatophagus ovis, causing fusträude of sheep.

Dermatophagus felis, canis et cuniculi, causing ear-itch.

Thus there occurs in the horse :

1. *Sarcoptes itch*, which may spread over the entire body, but is especially common upon head, neck and shoulders. It appears as small circumscribed spots, which soon become bald ; these gradually enlarge and may become very considerable in size. Careful examination reveals small, usually isolated nodules, which soon either become vesicular and burst, or allow a thick, sticky fluid to transude. After a while they dry up into brownish crusts. There is also an active desquamation of the epidermis. Itching is always marked, and the vigorous rubbing and scouring causes superficial or deeper lesions of the skin, and inflammatory processes of the most varied kinds.

2. *Dermatocoptes itch*. This begins on the mane, tail, over the larynx, on the flanks, the inner surfaces of the thigh, in short on those portions of the body that are protected by long hairs. It appears as grouped nodules, from which a sticky fluid trickles, which soon dries up into thick, yellowish-brown scales and crusts. As a rule the bald affected spots are sharply divided from the normal skin. The further changes occur from the rubbing and scouring caused by the intense itching.

3. *Dermatophagus itch*. This is localized on the legs and is seldom seen above the knee. It causes considerable itching, especially at night, giving rise to energetic stamping, gnawing and rubbing. Finally there occurs desquamation of the epidermis, loss of hair, the formation of crusts and thickening of the skin.

But dermatophagus may exist upon the extremities without causing any eruption at all (Johne.)

In cattle there occurs:

1. *Dermatocoptes itch*. This begins at the side of the neck and the root of the tail, and spreads later to the back, breast and shoulders. Small nodules appear, accompanied by intense itching, and a fluid transudes which soon dries up into greyish-brown, dry crusts. The hair falls out and the skin finally becomes thickened, leathery and folded.

2. *Dermatophagus itch* (Steifsräude.) At the root of the tail and the ischial fossæ, crusting and falling of the hair occurs, accompanied with itching. In rare instances the eruption spreads into the posterior surface of the legs, back and neck.

In the sheep there occurs:

1. *Dermatocoptes itch*, the most important form of the malady in this animal. This is the common sheep itch, which appears upon all portions of the body that are covered with wool. The itching is very intense. Small yellowish papilles appear among the long hair, and soon develop into vesicles and pustules. They finally rupture and dry up into yellowish-brown crusts. There is also active epithelial desquamation. The wool of the affected area loses color and becomes loosened; but it is retained in place long after, from the matting together of the fibres by the sticky and hardened lymph.

Finally, we find extensive bald, thickened and plicated areas of skin, with cracks and fissures.

2. *Sarcoptes itch* causes a fairly harmless skin eruption. In merino sheep it only spreads over the parts of the head not covered with wool; whilst in sheep whose wool does not contain fat (Neapolitan and others), it may gradually spread over the entire body. It is usually pruriginous, and leads to the formation of firmly adherent crusts, 0.5–1 cm. thick.

3. *Dermatophagus itch*. This "foot itch" begins on the feet (Kötengrind), and may finally involve the entire extremity and the scrotum or udder. It is characterized by itching, moderate redness, desquamation of the epidermis and the formation of yellowish-white crusts.

The *sarcoptes itch* occurs in the goat, and it is said by Walraff to be easily communicable to man, at first on the head

and later on other portions. After a papular stage there appear bald spots covered with greyish scales and yellowish or blueish-grey fishscale-like crusts. There is much itching. The skin is wrinkled and thickened between the crusts.

In the pig the itch appears as the *sarcoptes itch*. It is first seen on the skin of the cheeks, the back and the inner surface of the legs, and spreads then over the entire body. These gradually form whitish-grey crusts, 5-10 mm. thick, which give the animal a peculiar fungoid appearance. The bristles fall out and the skin is thickened and wrinkled.

In the dog we have:

1. *Sarcoptes itch*. Here the head, belly, root of the tail, prepuce are especially liable to be affected. There appear small red macules, which become papulæ and vesicular and sometimes even pustular. These then dry up into greyish-yellow crusts. There is marked desquamation of the epidermis, falling out of the hair, and the vigorous rubbing and scrubbing caused by the itching leads to a secondary eczema which is polymorphous, and usually leads to thickening and wrinkling of the skin.

2. *Dermatophagus itch*. The *d. canis* above mentioned is found in the external auditory passage of the dog. Dogs often suffer from otitis externa, and in the abundant purulent secretion these itch-insects are occasionally found. What part they play in the causation of the malady is not fully known.

(To be continued.)

EXTRACTS FROM FOREIGN JOURNALS.

NARCOTISM SIMULATING TYPHOID FEVER—PRODUCED BY PAPAVERUS RHŒAS.

BY M. L. TRASBOT.

The necessity of careful and minute inquiry into the history of cases is enforced by the recorded errors of diagnosis which are sometimes justly charged upon veterinarians, and it is from the fact that these errors not unfrequently lead to very serious, and may indeed result in fatal consequences to the patients, that the record of their occurrence derives its principal value. In the

Recueil for January, 1888, Professor Trasbot reports the history of six cases, which, from the symptoms exhibited, and in part from the past history of the place as well from its imperfect present history, were at first diagnosticated as cases of simulated typhoid fever. In fact, they were to a certain extent so considered. The first animal was treated by Professor Trasbot, according to his judgment of the symptoms and indications, and recovered in twenty-four hours. A second animal became sick two days later, with the same symptoms, and was as promptly relieved by similar therapeutic measures. A few days later four other horses were attacked with the same symptoms, and were likewise relieved by the same form of treatment. The symptoms present with all the animals may be thus described: diminution of general sensibility; stiffness of the loins; dryness of the skin; respiration deep and slow (12 to 13); feebleness and slowness of the pulse (35); injection of the conjunctiva; dilatation of the pupils; apparent impairment of sight and hearing; fœces small and hard; absence of abdominal pains; great weakness; sleepy appearance; temperature normal, so far as it was taken. The treatment consisted in bleeding and saline laxatives.

On more careful investigation of the cases they proved to be due to the eating of wheat straw given to the horses as part of their ration, in which a large quantity of dry poppy head flowers (*papaverus rhœus*) were mixed. A change of diet prevented any further trouble.—*Recueil de Medic. Vet.*

EPITHELIAL CANCEROUS GROWTH OF THE CHEST IN THE HORSE.

BY MESSRS. WEBER AND BARRIER.

The January number of the *Recueil* reports a very interesting case of large epithelial carcinomatous growth in the chest of an old horse, which had for some years exhibited some very peculiar symptoms. The disease seems to have first appeared about a year previous, at which time he became affected with a slight roaring, and soon after with some stiffness forward, followed by œdema of the chest, of the axilla, and at the base of the neck and internal face of the fore arm. These symptoms were treated as manifes-

tations of purpura, and the patient appeared to be somewhat relieved, soon, however, to relapse into his former condition. While at rest, his respiration seemed to be almost normal, with a regular pulse, though weak. His appetite was good; the intestinal and urinary functions normal, and the temperature natural, with an appearance of general good health. Yet the superficial blood vessels were dilated and the veins of the neck, chest and shoulder, principally the jugulars, swollen; the glosso facial being so much enlarged as to interfere with taking the pulse. This condition of the blood vessels was more marked on the left than on the right side. When the animal was put to work, the enlargement of the veins became greatly increased, the size of the jugulars becoming enormous. The whole condition was aggravated as the exercise continued, until at length the difficulty of walking reached the point of inability, the trouble with the respiration becoming correspondingly greater, and with bleeding at the nose adding itself to the other manifestations, the suffering animal would refuse to move further. But meanwhile the pulse remained comparatively but little altered, and retained its regularity free from any intermittence, while the temperature was only slightly increased.

Percussion of the chest revealed entire dullness in the lower part with but little resonance above—the dullness more marked on the left side, but existing also on the right. Auscultation discovered an extremely weak respiratory murmur, noticeable above, but absent below. The most careful examination of the heart failed to contribute to the formation of a positive diagnosis. The animal was at length destroyed and at the post-mortem examination of the chest an enormous epithelial carcinomatous growth was found, weighing not less than thirty-four pounds. It had numerous and even entire pleuritic adhesions in almost the entire extent of the chest, which increased more and more from the diaphragm forward, and interfering by their size and their adhesions to the pericardium with the functions of the heart, and thus giving rise to the external trouble of the circulation. Microscopic examination of the neoplasm demonstrated its true carcinomatous nature.—*Rec. de Med. Vet.*

TRAUMATIC PERICARDITIS.

BY MR. MARION.

A cow presented the following symptoms: A hard, indolent, painless œdema, involving the intermaxillary space and extending upwards along the parotid, and the pulse at the glosso facial not perceptible on that account; respiration difficult and with double expiration, as in pulmonary emphysema; heart-beats slow and irregularly intermittent and difficult to detect; auscultation over the heart giving a slight metallic sound; half of the left lung dull on percussion; right lung normal; venous pulse once or twice well marked.

From these signs a diagnosis was made of traumatic pericarditis, and a fatal prognosis pronounced. For a few days very little variation could be discovered. Then the œdema of the head extended downward to the front of the chest; there was increased dullness on the left side; the metallic sound increased; the breath became offensive; there was slight thoracic effusion, participated in by the pericardium, which on being punctured discharged a purulent, yellowish-white and offensive fluid.

She continued to grow worse and died at the end of twenty days. At the post-mortem a nail about two inches in length was found imbedded in the sternum, between the sixth and seventh ribs. It had evidently been introduced into the recmen and passed through the pericardium into its cavity, without injuring the heart, and there excited the fatal pericarditis.—*Rec. de Med. Vet.*

OPENING OF THE MELBOURNE VETERINARY COLLEGE.

Yesterday afternoon a number of gentlemen met at the veterinary college of Mr. Kendall, M.R.C.V.S., in Brunswick street, Fitzroy (not far from Victoria street), to take part in the opening ceremony of that institution,. A brief inspection of the premises before the opening ceremony was sufficient to make one aware of the completeness of the arrangements for the treatment of sick or hurt horses and dogs, etc. Nearly all the stalls were occupied by

animals getting cured, and the dog kennels were nearly all tenanted by "patients." The place is the only one of the kind in the colony, and now that its benefits are becoming widely known they are much sought after by those who have sick or injured animals. The Principal is Professor Kendall, M.R.C.V.S., and the lecturers are as follows:—Anatomy of the horse and other domesticated animals, Professor Rivett, M.R.C.V.S.; physiology, Dr. J. F. Joyce, M.D.; histology and the use of the microscope, Professor Kendall, M.R.C.V.S.; chemistry and botany, College of Pharmacy; pathology, Professor Kendall, M.R.C.V.S.; hospital practice and clinical instruction, Professor Rivett, M.R.C.V.S.; operative surgery and obstetrics, Professor Kendall, M.R.C.V.S.; materia medica and toxicology, College of Pharmacy; therapeutics and dispensing, Professor Rivett, M.R.C.V.S. The college has just been established, and already there are a fair number of students. At the opening ceremony of the college yesterday afternoon, Mr. Colville, Secretary of the Central Board of Health, presided in the absence of the Hon. J. L. Dow, who was unable to be present. Apologies for non-attendance were received from His Excellency the Governor, Baron von Mueller, Mr. Blackett, Mr. Shillinglaw and others. All of them expressed their warm admiration of the undertaking, and the benefits that would accrue from it.

The Chairman opened the proceedings, and called on Professor Kendall, who delivered the inaugural speech.

THE INAUGURAL ADDRESS.

Professor Kendall said: The occasion which has brought us together to-day is one of more than ordinary interest, not only to stock-owners but to the general community. Australia has already become one of the largest stock-raising countries of the world, and there remains ample scope for future developments and possibilities. It is therefore of the utmost importance to the future welfare of the country that we should endeavor to attain as high a degree of excellence as possible in all classes of live stock. But everyone who has any practical knowledge of the matter is aware of the difficulties to be met with in attempting to improve the different breeds of stock, and also of maintaining any given standard of excellence. Not only have we variations of soil and climate to

deal with, but a variety of conditions which constantly tend to a deterioration in size, form, and quality, and to an increased liability to hereditary and other forms of disease. As a field for the study of comparative pathology few countries offer greater advantages than this. Prior to its being settled by Europeans it contained none of those animals that have been domesticated and have become the inseparable companions of civilized humanity; consequently, their comparatively recent introduction enables us to distinguish pathologically variations due to climatic or geographical causes. Many of the diseases from which our animals suffer differ in no material respect from those of the same character produced by similar causes in other countries, whilst others appear to be considerably modified in character and intensity from climatic or other reasons. Others again may be termed indigenous to the country, and are not met with elsewhere. Many of the latter are as yet but little understood, so that there is now an open field for a number of well-trained men, to say nothing of future requirements. As the country becomes more densely populated, and additional restrictions are placed upon animals by the further sub-division of pastoral lands, diseases are sure to increase in prevalence and variety, and the need for veterinary surgeons will become still more urgent. In the field of therapeutics there is much room for investigation. Already many valuable medicinal plants have been discovered, and I doubt not there are dozens of others amongst our native flora that only require a series of well-conducted experiments to test their effects upon animals in order to prove them to possess great therapeutic value. This is essentially the veterinarian's province, and it is to be hoped that some of you gentlemen who enter upon your course of study to-day will acquire an aptitude and liking for this kind of work, and ultimately become specialists in it. The chief aim of veterinary science is, or should be, the prevention of animal diseases, and, I might also add, many of the diseases incidental to human beings which are due, either directly or indirectly, to the animal food we eat. The sooner this is generally recognized the sooner will the teaching of veterinary science receive the appreciation its importance deserves. The prevention of animal diseases is a matter which

rests to a great extent with stock-owners themselves, and one of the main objects of this establishment is to give sons of stock-owners, and others who intend following pastoral pursuits, an opportunity of acquiring practical as well as theoretical knowledge regarding the causes and nature of animal diseases that will enable them to select sound, healthy animals to breed from, and so readily detect any deviation from health in the animals under their immediate care, and discover the causes which give rise to it. Animals, as well as human beings, have a language by which they can express their wants and desires, pains and pleasures—a language which is superior to our own, in that it contains no lie. It will be one of the most important parts of our duty to teach you how to interpret this language, so that you may be able to attach the correct meaning to the various expressions it contains. Those of you who intend following the calling of veterinary surgeons will find that your future will depend to a great extent on the facility and success with which you can diagnose the various diseases of animals. It has often been said that it is more difficult to determine the character of a disease affecting an animal than in the case of human beings. This I hold to be contrary to fact. Whatever information we are able to obtain from the symptoms expressed by a sick animal may be relied upon as being real and truthful. Animals, unlike human beings, seldom dissemble, and are not influenced to the same extent by imaginary complaints. Our difficulty does not rest with the animals themselves, but with the grooms, drivers, or others in attendance upon them, who, to cover some error or fault of their own, are prone to throw us off the right track as to the cause or character of a disease or injury, so that information obtained from this source has often to be taken with great reservation. I believe it is now the custom in several of the Continental schools to teach medical students how to diagnose animal diseases before allowing them to practise on human beings, and there has recently been some agitation in England in regard to adopting a similar method of teaching. To an unprejudiced mind there can be no doubt about the beneficial effect of such a training upon the students, as it must tend to a higher development of the perceptive faculties, and to less dependence being placed on what

a patient has to say about the complaint from which he suffers. I heartily congratulate those of you who have joined these classes with a view of qualifying as veterinary surgeons. To those who have a love and regard for the lower animals there can be no more congenial occupation than to attend them in their sufferings, and, being directed by their mute appeals to a correct understanding of their wants, to be able to alleviate their pain and restore them to health and usefulness. It has often been said that animals are not worth doctoring in this colony, and that it is cheaper to destroy them and replace them by others. The records of the hospital in connection with this institution show, to the credit of owners, that it is not the money value of a horse or other animal alone that induces them to place it under professional treatment. A wealthy man may lose a horse and think little or nothing about his loss, but the man whose horse has been earning him his living perhaps for years, does not allow it to suffer and die without making an effort to have it restored to health, and in the majority of cases he is rewarded for his trouble. While we are compelled to admit that up to the present veterinary science has made but little progress in Australia, there is every reason to believe that there is a much brighter prospect in the future. We have to congratulate ourselves on the improved status given to the profession by the Veterinary Surgeons Act of 1887. The public will now be able to judge us on our merits as veterinary surgeons, and no longer have their opinions influenced by the conduct and abilities of a number of men practising under assumed titles. The four years study which the Act prescribes before you will be eligible for your final examination, which is a longer period than that enforced in the colleges of Great Britain, should be a sufficient guarantee that the status of the profession will not suffer at your hands if you only avail yourselves of the opportunities that will be given you of gaining both theoretical and practical knowledge. During the whole of the period you will have the benefit of seeing an extensive hospital practice which in number and variety of cases is equal to that afforded by any of the British veterinary schools. In theory your attention will be first directed to what may be termed your preparatory studies. On three mornings in each

week, Professor Rivett will lecture on anatomy, commencing with the skeleton, whilst it will be my duty to lecture on the soft structures of the body. For chemistry and botany you will be required to attend at the College of Pharmacy, where every facility is given for a thorough training in these important subjects. Dr. John F. Joyce, whose high scientific attainments are well known, will lecture on physiology and histology, both of which you will find of great value at a later period of your studies. Your more advanced studies at the College of Pharmacy will embrace materia medica, pharmacy, and toxicology, and at the institute you will be instructed in pathology and veterinary medicine and surgery, including the diseases of the horse and other domesticated animals. It is probable that at a later period of your course other teachers will be added to the staff and the curriculum be made as complete as that of any similar institution in the world.

Professor Rivett addressed a few remarks to the students, and moved a vote of thanks to the Chairman, who, in responding, expatiated on the incalculable benefits of the college.

FIFTH INTERNATIONAL VETERINARY CONGRESS.

APPEAL TO FOREIGN VETERINARIANS.

DEAR SIR:—The Fourth International Veterinary Congress, at its last session in Brussels, in September, 1883, selected Paris as the place of meeting of the Fifth Congress, and appointed as a Committee of Organization those of its members who are residents of that city, with a condition providing for the co-operation of the members of the Bureau of the Brussels meeting.

When the time arrived for the consideration of the first basis of the fifth meeting it was found that the members from Paris who had belonged to the Brussels Congress were only three in number: Mr. Houssin, delegate from the Society of Practical Veterinary Medicine, and Messrs. Lavalard and Leblanc, delegates of the Central Society of Veterinary Medicine. Not willing to assume individually the entire responsibility of their commission, they decided to refer the subject to the societies of which they are representatives.

Besides Mr. Chauveau, who by virtue of his official position was naturally looked to to take the place of our regretted Professor Bouley, this committee may now be announced as composed of Messrs. Benjamin, Lavalard, Leblanc and Weber, delegates of the Central Society of Veterinary Medicine, Messrs. Butel, Houssin, Remaud and Rossignol, delegates of the Practical Veterinary Society, Messrs. Nocard and Trasbot, delegates of the Alfort School, and Messrs. Capeau and Delamoth, delegates of the Secretary of War.

You will thus perceive that the constitution of this committee is strictly in accordance with the design expressed by the Fourth Congress, all the members named being residents of Paris or its suburbs.

The Brussels Congress had decided that the next meeting should take place within five years, that is, at the latest, in 1888. Considering, however, that the international exhibition of 1889 will certainly attract large numbers of French and foreign veterinarians to this city, and that this fact will largely increase the importance and the dignity of the Congress, the Organizing Committee has by a unanimous vote agreed that the Fifth Congress should not take place before September, 1889. This month has been selected because it is a time of the year when professional duties are the least pressing, and the professors of the veterinary schools can take longer leave of absence, and also because it is at that time that the monument to be consecrated to the memory of H. Bouley is to be erected and dedicated. No occasion could be more favorable for giving to this important ceremony all the eclat and interest it deserves, and thus to pay well deserved homage to the man who has done so much for his profession, and whose life and works will never cease to reflect honor upon its history.

We, therefore, come to ask you to lend your co-operation to our efforts. It will be doubly valuable now, because it will assure us of your assistance in the selection of the important questions which will be discussed by the Congress, and also because it will certainly be influential in inducing the adhesion of others with yourself.

As soon as the text of the questions to be presented before the Congress shall be determined on, with the assistance of the members of the Bureau of the Brussels Congress, you will receive due notification of the fact.

Accept the assurance of our consideration.

EDW. NOCARD,
Secretary.

CHAUVEAU,
Pres. of the Committee.

The assessment for each member of the Congress is fixed at \$2.00, which will entitle each member to receive all the publications of the Congress: Address Mr. Capon, 35 rue de Babylone, Paris (Seine.)

FORM OF SUBSCRIPTION TO THE FIFTH INTERNATIONAL VETERINARY CONGRESS.

I, the undersigned, veterinary surgeon to
hereby express my desire to be enrolled
as a member of the Fifth International Veterinary Congress, and
will to this effect pay for my assessment the sum of \$2.00.

Name and address.

ANSWER TO INQUIRY.

NEW VETERINARY COLLEGE STUDENT, EDINBURGH.

The only way a diploma from the American Veterinary College could be obtained in your condition, is to attend a full winter course of lectures and pass your examination for graduation. Your fees will be \$5.00 for matriculation, \$10.00 for dissection, \$100.00 for lectures and \$25.00 for diploma.

A. LIAUTARD, *Dean.*

SOCIETY MEETINGS.

ALUMNI ASSOCIATION OF THE AMERICAN VETERINARY COLLEGE.

The regular meeting of the Alumni Association of the American Veterinary College was held in the lecture room of the College, on Thursday, March 1st the President, D. J. Dixon, D.V.S. in the chair.

Members present were Drs. Johnson, Bridges, Hoskins, Dixon, Miller, Deronde, Moyer, J. C. Jackson, Wray, Peabody, McLean, Coates, Doyle, Birdsall, A. J. Dodine, Falker, Helm, Sellers, Pendry, Curry, Strange, and Autenreith.

The Secretary not being present at the opening of the meeting, the reading of the minutes was laid over and the report of the Executive Committee called for.

Dr. Miller (Chairman) said there had been no meeting of the Committee, consequently there was no report.

The President stated that there had been no business to come before the Committee, except the question of giving the usual prize and he had written each member of the Committee, asking for their views as to how the money should be raised to pay for it. He had received replies from all but one to the effect that it should be raised in the usual way. He had therefore instructed the Secretary to send out postal cards, and had selected a set of books as the alumni prize.

A warm discussion followed this explanation; several members present holding that the President was simply an ex-officio member of the Executive Committee and had exceeded his power; that the Executive Committee had been very remiss in their duties in not arranging for a general alumni dinner, etc. The action of the President was supported by others present, particularly Dr. Miller, who said the President had simply carried out the wishes of the Executive Committee and had certainly not exceeded his power.

Dr. Pendry said he considered it the duty of the Chairman to call a meeting of the committee, and not the President, and if no meeting had been called it was the fault of the former and not the latter.

Dr. Birdsall said there was no objection about giving the prize, but there ought to be some reason why a general alumni dinner had not been arranged for.

Dr. Miller referred to the last meeting of the Association, so few being present and the dinner a complete failure, claiming that it was the individual members and not the committee that were responsible for such a result.

Dr. Johnson endorsed the remarks of Dr. Miller, but he thought the Executive Committee should have tried to find out the reason of the general failure, and he had so expressed himself in his letter to the President.

Dr. McLean said there was no question as to the prize, but whether it had been given in proper form. He considered Dr. Miller the proper person to explain. The Executive Committee was the proper body to have acted; they had failed in their duty and they ought not to be whitewashed.

Many other explanations and reasons were given by some of those present, in which Drs. Hoskins, Coates and Sellers joined, Dr. Birdsall holding that they should have arranged for a dinner, if only five were present.

On motion, the Secretary was instructed to read the minutes of the last meeting, which were then adopted as read.

Dr. Miller moved that all previous minutes, that had not been acted upon, be approved. Carried.

Moved by Dr. Birdsall, seconded by Dr. Miller, that the Association have a dinner each and every year. Carried.

On motion of Dr. Hoskins, the following motion was duly carried:

"That the Alumni Executive Committee shall present, at the next annual meeting, a plan for the provision of the dinner, such plan to devise ways and means for the successful conducting of the same."

On motion, Drs. Johnson and Miller were appointed a committee to invite the graduating class to be present. After a formal introduction by Dr. Miller, they were welcomed in suitable terms by the President.

Prof. Weisse, of the Board of Trustees, was warmly welcomed and addressed those present at considerable length, with regard to the plan of erecting the new college building.

The Secretary and Treasurer's report was then read, ordered received and placed on file.

Dr. Birdsall moved, and it was seconded, that the by-laws be altered so as to make the annual dues one dollar. Carried.

The election of officers was then proceeded with and resulted as follows:

President, Dr. D. J. Dixon, re-elected by acclamation; Vice-President, Dr. W. H. Wray; Treasurer, Dr. Birdsall; Secretary, Dr. A. T. Sellers; Librarian, Dr. Hoskins.

On motion, the Treasurer was ordered to pay the Secretary's account for printing and postage, also for the set of books given as the alumni prize.

On motion, Drs. Hoskins and Johnson were appointed a committee to draft suitable resolutions on the death of the late Drs. A. L. Brown and Ed. Douglass, and to remit a copy of the same to each family.

There being no further business the meeting then adjourned in full harmony, promising well for the future.

NEW YORK STATE VETERINARY SOCIETY.

Meeting called to order at 8 p. m., Dr. W. H. Pendry in the chair.

Roll call dispensed with.

Minutes of the previous meeting were read and adopted.

Dr. R. W. Finlay then read a very interesting paper on Mechanical Injury to Tendons, which brought forth a very lengthy discussion, all present taking part in it. The essayist backed up his paper by citing several cases of prominent horses he had treated during the past year, all of which made a satisfactory recovery.

Dr. W. E. Cuff then moved that a vote of thanks be extended to the essayist of the evening, which was duly seconded and carried.

The Secretary read a communication he had received announcing the death of Dr. S. Cohen, V.S., Cambridgeport, Mass.

Dr. R. W. Finlay moved that the Secretary be instructed to forward to the deceased a resolution tendering the sympathy of this Society, and expressing its regret at the death of one of its members, which was duly seconded and carried.

The Chairman of the Board of Censors, Dr. S. K. Johnson, then reported that it was impossible for him to get the members of the Board to convene; he then tendered his resignation as a member of the Board of Censors.

Dr. T. Birdsall moved that it be accepted, which was seconded and carried.

Dr. J. H. Jacobus then tendered his resignation, which was accepted.

Dr. W. H. Pendry moved, as an amendment, that the resignation of Drs. Jacobus and Johnson be not accepted, which was lost.

Dr. W. E. Cuff then read a communication from Dr. F. Birdsall, tendering his resignation as Vice-President of this Society; motion that it be not accepted.

Dr. Birdsall insisting on his resignation being accepted, the question was put and carried.

Dr. Macham, a member of the Board of Censors, offered his resignation, which was accepted.

Dr. W. E. Cuff tendered his resignation as Secretary of this Society, which was accepted.

Dr. Pendry having left the Chair and calling Dr. R. Ogle to it, moved that we now proceed to the election of officers; the motion not being seconded, it was not carried.

Dr. T. Birdsall moved that the Secretary be instructed to notify all members of this Society to attend the next regular monthly meeting, to be held at Cooper Union and at which an election of officers will take place; which was duly seconded and carried.

Dr. E. Charum moved that the Society request the resignation of the President, for the good of the Society, which was duly seconded and carried.

In answer to the above motion, Dr. Pendry said if he was allowed to withdraw certain charges he had made, and which are to be investigated, he would resign, not alone as President, but also as a member of this Society, to which Drs. Birdsall and Charum strongly objected.

Adjourned.

W. E. CUFF, D.V.S., *Secretary*.

NEBRASKA VETERINARY MEDICAL ASSOCIATION.

Pursuant to a call issued some time since, a meeting was held at the Paxton Hotel for the purpose of forming an organization of the veterinary surgeons of Nebraska.

The following gentlemen were present: Drs. L. H. Simpkins, Kearney; S. M. Osborn, Fremont; C. Brittell, St. Edwards; M. A. Bailey, Albion; A. W. Carmichael, DeWitt; W. S. Brayton, Beatrice; G. R. Young, Richard Ebbitt, H. L. Ramacciotti, Omaha; J. Gerth, Jr., Lincoln.

The meeting was called to order by Dr. J. Gerth, Jr., who was made temporary chairman. In taking his seat Dr. Gerth stated that the object of the proposed Association was to promote a fraternal feeling among the members, elevate the standard of the profession by scientific discussion and intellectual intercourse, and that by organization it would bring the profession into notice and add to it more responsibility and give it more dignity and honor. He thought the profession a very important one, and that organization was necessary to keep it from retrograding.

Mr. G. R. Young, of Omaha, was elected temporary Secretary.

After the adoption of a Constitution and By-Laws, the following officers were elected: President—State Veterinarian J. Gerth, Jr., Lincoln; Vice-President—Dr. H. L. Ramacciotti, Omaha; Secretary—Dr. G. R. Young, Omaha; Treasurer—Dr. W. S. Brayton, Beatrice; Board of Censors, Drs. L. E. Simpkins, Kearney, C. Brittell, St. Edwards, and Richard Ebbitt, Omaha.

The next meeting of the society, which by the Constitution is named the Nebraska Veterinary Medical Association, will be held at Lincoln on the second Thursday of June. Papers will be read at that meeting by Drs. W. S. Brayton and G. M. Osborn.

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